Who is leading the campaign charts? Comparing individual popularity on old and new media

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Abstract

Traditionally, election campaigns are covered in the mass media with a strong focus on a limited number of top candidates. The question of this paper is whether this knowledge still holds today, when social media outlets are becoming more popular. Do candidates who dominate the traditional media also dominate the social media? Or can candidates make up for a lack of mass media coverage by attracting attention on Twitter? This study addresses these question by paring Twitter data with traditional media data for the 2014 Belgian elections. Our findings show that the two platforms are indeed strongly related and that candidates with a prominent position in the media are generally also most successful on Twitter. This is not because more popularity on Twitter translates directly into more traditional media coverage, but mainly because largely the same political elite dominates both platforms.

Key words: Twitter, election campaigns, mass media

Introduction

Traditionally, election campaigns are won in the mass media. Candidates that can attract plenty of journalistic attention and appear most on television and in newspapers are mostly also those that perform well on Election Day. Candidates' best bet, then, always used to be to aim for getting attention through these mass media outlets. However, studies in different contexts have shown that media attention is distributed highly unequally over politicians, meaning that most of them remain outside the media's spotlights (Sellers & Schaffner, 2007; Tresch, 2009; Wolfsfeld, 2011). The central query of this paper is whether this knowledge still holds to this day, when social media outlets are becoming ever more popular. Do social media provide a more equal playing field with more politicians getting a share of the attention? Or does it remains business as usual and do social media reflect the same focus on a limited number of elite actors? In the literature these conflicting expectations relate to the so-called normalization and equalization hypotheses (Gibson & McAllister, 2014; Larsson & Moe, 2014). While some scholars expect that social media create a more open and equal platform for politicians to reach out, others temper these positive expectations and stress that the new media are driven by the same dynamics that determined traditional news media.

We test these conflicting expectations using data from the 2014 Belgian election campaign. We do not focus on parties, but rather on individual politicians and more specifically, their Twitter accounts (see also Vergeer & Hermans, 2013). We compare the attention of a large number of individual candidates in the traditional news media to their activities and popularity on Twitter. Are candidates who are more active on social media also the ones that lead the traditional media charts? Or do we rather witness a tradeoff, in which candidates who invest more in digital campaigning are less prominent in the mass media? In this way, we pair Twitter data with traditional media data, hence, take a "multi-platform" approach. In doing so, we meet one of the current shortcomings of social media research, which is precisely the lack of understanding of the multi-media ecology of information flows (Tufekci, 2014).

First, we discuss the recent literature on the role of old and new media in (personal) election campaigns. Special attention is given to the conceptualization of Twitter use as a new platform for politicians. Since the relationship between traditional mass media and social media has seldom been studied (but see Jungherr, 2014a), we formulate research questions instead of hypotheses. Next, we present our research design and the main results. Although we are careful with making causal inferences, our study shows that being successful in traditional newspapers and on Twitter is strongly, but far from perfectly, correlated. Those candidates with the most mass media attention are generally also the ones who are most popular and successful in reaching out on Twitter. It is

especially a small political elite of party leaders and ministers which is able to dominate both the traditional and new media charts. At the same time, we see that being very active on Twitter does not improve one's media visibility. These findings are largely in support of the normalization hypothesis. We elaborate on potential explanations for these findings in the discussion section and suggest pathways for further research.

Theory and Research Questions

Defining twitter use

Because of their potential impact on knowledge, attitudes, and behaviour of voters, election campaigns are a central topic of research in political communication. In particular, the role of the mass media has always been a prominent aspect of these studies. The media are generally considered as a key arena to reach out to voters and improve electoral support (e.g., Druckman, 2005; Holbrook, 1996; Hopmann, Vliegenthart, De Vreese, & Albæk, 2010; Norris, Curtice, Sanders, Scammell, & Semetko, 1999). Also for lower-ranked candidates media attention leads to more preferential votes which can be considered as a personal electoral capital (Van Aelst, Maddens, Noppe, & Fiers, 2008). During the last fifteen years the so-called new or digital media have gradually been included in theoretical models of campaigning (Norris, 2002; Foot & Schneider, 2006; Gibson & Cantijoch, 2011). Websites, blogs and e-mail offer parties and candidates new opportunities to reach out and interact with voters. More recently, scholarly attention shifted to web campaigning 2.0, focusing on the role of social media (Gibson, Römmele, & Williamson, 2014; Jackson & Lilleker, 2009; Lilleker et al., 2011).

Social media sites represent a radical break with other media. These outlets can be considered as "networked publics" in which citizens, politicians, and journalists alike are able to add content (boyd, 2011). To illustrate the difference between social media and traditional mass media, the four structural affordances highlighted by boyd (2011) are useful. First, persistency on these social network sites is high, which means that online behavior (liking, favoriting, retweeting) is automatically recorded and archived. This allows for the quantification of one's actions. Second, the information obtained through social media is easily shareable, thereby increasing the circulation of content. Third, the affordance of scalability implies that there is a great potential visibility of both users and their expressions. Last, content on social media is easy to search and retrieve.

We take these affordances as our starting point to understand how the Twitter platform and its structural characteristics shape user activity and position in the communication network. Since its

launch in 2006, Twitter has evolved to a web-based service that "*allows users to maintain a public web-based asynchronous "conversation" through the use of the 140-character messages.*" (Murthy, 2013: 1-2). This description highlights the public nature of Twitter communication. In addition, Twitter users' preoccupation with news and media emphasizes its connection with the broader public debate, which has traditionally been shaped by the mass media. As with other social media sites, Twitter features persistency in that it records all user activities and in turn allows for their quantification. An example of this is the 'trending topics' section, which algorithmically ranks hashtags and 'popular' keywords on a real-time basis. This implies that user behavior, such as writing, favoriting or retweeting a tweet, is 'datafied' and can therefore be interpreted in a comparable manner (van Dijck & Poell, 2013).

These metrics of behavior, in turn, imply that we have a quantitative indication of users' respective role and importance within a particular discourse or conversation (Ausserhofer & Maireder, 2013: 302). In line with our empirical work, we identify two indicators of politicians' impact on Twitter; namely popularity and followers. Below, we conceptualize popularity in terms of mentions, retweets and favorites received. Further, we argue that politicians' follower count represents the user's overall impact on Twitter. To conclude, we provide a note on user activity. Whereas popularity and followers reflect other users' attention towards politicians, activity is understood as politicians' attention towards other users.

(1) Popularity

Mentions are part of the micro layer of communication on Twitter, reflecting interpersonal communication between users (Bruns & Moe, 2014). Using the "@username"-expression within a tweet, one can address specific other users, regardless whether there exists a follower-followee connection or not. Mentions are both *conversational*, as well as *referential* markers. As a conversational marker, it can be used to join in the 'chain of replies' to another's tweet. More specifically, replies are "@username"-expressions placed at the beginning of the message. However, for reasons of clarity, we use the label 'mentions' to refer to all "@username"-expressions. As a referential marker, they can be used to refer to another user, using his/her Twitter username (e.g. "I will vote for @politicianX tomorrow" (Bruns & Moe, 2014; Honeycutt & Herring, 2009). In both cases, they increase the user's personal visibility, can attract additional followers and amplifies the user's impact in the network.

Retweets can be used by users to share, or reproduce, existing content, and thereby contribute to the visibility of other users (and their tweets) in the network. Incoming retweets are argued to reflect users' role as sources of information (Bruns & Stieglitz, 2014). More than is the case with replies or

mentions, retweets have the potential to go beyond the user's follower network. Like retweets, favorites endorse particular messages, although this function is less documented in extant literature. Their meaning is ambivalent, as a favorite can not only be interpreted to signify agreement with the tweet, but it may also be used in other ways, for example as a bookmark. When used as a bookmark, it adds to the retrievability of Twitter content. Also, since tweets that are favorited by people one follows are currently displayed in the "Discovery" tab of Twitter, the favorite function also complies with the shareability and scalability affordances of the social network. In sum, we argue that mentions (including replies) can be considered as an indicator of personal popularity, whereas retweets and favorites rather function as markers of message popularity.

(2) Followers

Followers are the subscribers to a Twitter account. Follower networks are key determinants in the flow of information on Twitter, as these reflect the user's primary audience (Bruns & Stieglitz, 2014). As following is not necessarily reciprocal, it can be interpreted as a Twitter "currency". Compared to the metrics above, which apply to specific Twitter messages, we understand followers as a more enduring user metric. Often, established politicians are able to reach the largest crowd on Twitter, even without being very active or creative.[1]

(3) Activity

The popularity measures discussed above are related to politicians' activity on the platform. More specifically, politicians have to send tweets in order for them to be retweeted and favorited. Witty and sharply formulated political tweets, for example, have a great potential of spreading around the network (Parmelee & Bichard, 2012). In addition, politicians can promote their candidacy and interact with citizens, journalists, and other politicians (e.g. Graham, Broersma, Hazelhoff, & van 't Haar, 2013). Here, we understand *activity* as the tweets that the candidates compose and post themselves – in other words, non-retweeted content (i.e. 'regular' tweets and replies to other users). With this restriction, we aim to focus on candidates' original user activity.

It is clear that the relative importance of the metrics is hard to compare. For instance, one cannot compute exactly how the value of a favorite relates to that of a retweet. In addition, the metrics are interrelated and reinforce one another via a complex interplay of user actions and algorithmic processes. The latter enhances the asymmetrical nature of content distribution (and popularity), as a few messages receive a lot of attention and most remain unnoticed (Baym, 2013; Klinger & Svensson, 2014).

[1] In Belgium, Elio Di Rupo, prime minister from 2011 to 2014, was among the top Twitter users in terms of followers in 2013. http://bvlg.blogspot.be/2013/04/top-twitters-users-uit-belgie.html

Social media: between normalization and equalization

Since the introduction of new media in politics the scholarly debate is characterized by a discussion between optimistic and more pessimistic views on the democratic opportunities of these new communication technologies (Dahlgren, 2005; Margolis & Resnick, 2000). Although studies often provided mixed or nuanced support for both viewpoints (Gibson & McAllister, 2014), the contradiction is still reflected in the temporary theoretical reflections on social media and politics. The 'normalization hypothesis' suggests little change in media dynamics and power structures, while the 'equalization hypothesis' expects the opposite, and a more equal distribution of actors and voices in particular. Therefore, it is sometimes also labeled more generally as the 'transformation thesis' (Jungherr, 2014b) or 'innovation hypothesis' (Larsson, 2013). These more positive accounts start from the notion that networking technologies allow for a "politics of non-representation", as communication with the electorate can occur unmediated by traditional mass media (Fenton, 2012). On Twitter, currently every published tweet appears in all timelines of people who follow its sender. Thus, compared to the traditional media, politicians can be argued to be more autonomous in their means of communication, which in turn can be translated in a lower dependency on the traditional gatekeepers.

While the characteristics of social media may be asserted to improve the potential of a more egalitarian political landscape, empirical evidence seems to temper any high expectations. For instance, Gerhards & Shäfer (2010) show that the online presence of actors that deal with a particular issue (human genome research) strongly resembled that of traditional media coverage in both the US and Germany. Studies about e-campaigning by political parties in the Web 2.0 era also seem to favor the 'normalization hypothesis', which entails that political actors who are already powerful offline, tend to dominate on social media as well (Klinger, 2013; Schweitzer, 2011).

Nonetheless, exceptions have been found, which provide alternative evidence for the role of Twitter and its impact on the political debate. In Germany, for example, the non-establishment Pirate Party obtained a sustainable position in the debate on social media (Jungherr, 2014a; Jungherr, Jürgens, & Schoen, 2012). In a similar manner, in the Netherlands, candidates of opposition parties were somewhat more active on Twitter and had a larger follower base (Vergeer, Hermans, & Sams, 2011). In addition, some positive (albeit limited) effects of Twitter use on the number of votes have been found (Gibson & McAllister, 2014; Kruikemeier, 2014; Spierings & Jacobs, 2014). In this way, the social network offers some counter-balance to the role of traditional mass media, which provide mainly access to already-powerful actors. In addition, individual online campaigning via Twitter requires relatively few resources, compared to web 1.0 era campaigning (see Zittel, 2009). Therefore,

Twitter may have a greater equalizing potential. To conclude, without expecting a completely different distribution of political actors, the question is whether the normalization hypothesis holds firmly or if we see indications that Twitter is indeed a separate platform, offering new opportunities for other political actors to get in the news.

In this study, we take a holistic approach in considering aspects of within-Twitter interaction, and the interplay between Twitter and other media. First, we consider the role of both passive (incoming) and active (outgoing) social media affordances that are embedded within the Twitter architecture. Above, we have conceptualized these active and passive affordances as three different components of Twitter behavior: popularity, followers, and activity, to be able to measure how they relate to each other and to candidates' impact in the traditional media. However, the existence (and independence) of these dimensions has not yet been empirically demonstrated. Therefore, we ask whether this conceptualization is in line with what the data about these activities shows. Second, we move beyond the single focus on either traditional mass media or social media and rather focus on the interactions between them. So far, the vast majority of the studies on political uses of Twitter (and campaigns in particular) focus on one platform, i.e. Twitter and more specifically the content of the messages and the use of the Twitter conventions such as @replies (Graham, Jackson, & Broersma, 2014; Jungherr, 2014b). More specifically, we study to what extent popularity and activity on Twitter is related to attention in traditional media. Do traditional and emerging media have similar or diverse elites? These questions are considered within an election context.

Our research questions are formulated as follows:

> **RQ1:** Can we distinguish different dimensions of Twitter behavior?
>
> **RQ2:** Does Twitter 'flatten' the political landscape and give more equal opportunities to all candidates than traditional media do?
>
> **RQ3:** How do Twitter activity, and Twitter popularity, and attention in traditional media interplay?

Research Design

To study the relationship between Twitter and traditional media, we rely on Twitter data from political candidates and their appearance in the newspapers in the advent of the 2014 elections in Belgium. Belgium is a proportional parliamentary democracy with a flexible list system. As a

consequence, not only political parties are competing with each other for votes, but there is also a competition between individual candidates *within* the political parties (Deschouwer, 2009). A higher number of preferential votes could help candidates to leapfrog past their higher-ranked colleagues, thereby getting elected in parliament or obtain a better position in the next elections. In addition, preferential votes improve a (higher-ranked) candidates' chances of obtaining an executive mandate for candidates. Thus, it is important for political candidates in Belgium that not only their party gets covered in the media, but that they also receive media coverage themselves.

On May 25, three elections were held simultaneously on different electoral levels (regional, federal and European). In the month before these elections (April 24 – May 24), data from Twitter and newspapers were collected. In addition, we conducted a candidate survey to gather data on other characteristics, such as age, gender, nationality, political mandates, and we combined these data with information about the ballot list position and party membership of each candidate.

Our sample is restricted to the candidates that are electable in Flanders (the Dutch-speaking part of Belgium, reflecting 60% of the population in Belgium). In total, 955 of the 1519 Flemish politicians who participated in all three elections completed our survey (63%).[2] Of these 955 candidates, 492 had a Twitter account and we were able to retrieve in-depth Twitter data for 323 of them. We will conduct our analyses on this sample of 323 candidates with a Twitter account.

For the collection of the Twitter data we relied on the open-source tool *yourTwapperkeeper* which is commonly used within social sciences (for a detailed overview of this tool, see Bruns & Liang, 2012). For each candidate, an archive was set up which captured tweets from and to that particular user.[3] As the Twitter API is the only entry point to the data, there is no base for comparison and therefore there are no guarantees for a comprehensive dataset (Highfield, Harrington, & Bruns, 2013).

As stated earlier, we distinguish between different aspects of Twitter use: (1) Twitter *activity*, (2) *followers*, and (3) Twitter *popularity*. Twitter *activity* is measured by the number of tweets (including replies, but not retweets) the candidate sent during the campaign. For the second aspect of Twitter we take into account the number of *followers* the candidate had on April 24, 2014, the beginning of

[2] These are the effective candidates. Belgium also knows a system of successors, candidates who cannot get elected directly into parliament, but who get a seat if any of the effective candidates takes up a mandate. Since these successors cannot directly get elected into parliament we excluded them from the analysis.

[3] *yourTwapperkeeper* (Available at: http://github.com/jobrieniii/yourTwapperKeeper) is based on the Twitter streaming API, through which keywords can be "tracked". Aside the "track" parameter (which captures activity *to* a particular user), we also included the "follow" parameter to get Twitter activity *from* that particular user (For more information: https://dev.twitter.com/docs/streaming-apis/parameters#follow).

our data collection period. Finally, Twitter *popularity* consists of message popularity (i.e. retweets and favorites) and personal popularity (i.e. mentions and replies received).

Attention in traditional media was captured using the Belgian *Gopress* database, which contains all Belgian newspapers. For each of the candidates, we counted and checked the number of articles in which he or she was mentioned during the campaign (April 24 – May 24). In total, we included eight paid Flemish newspapers[4] and the free daily *Metro*.

Table 1 summarizes the variables used in our model and provides descriptive statistics. The first section of variables reflects attention in traditional media, activity and popularity on Twitter as well as the number of Twitter followers. We notice here that the standard deviations for these variables are very high, which indicates a lot of variety between the different candidates. The second section of variables contains socio-demographics and political background characteristics.

Table 1: Descriptive statistics of variables used in analysis

Variable name	**Mean (S.E)**	**Freq (%)**
Media attention	8.27(46.1)	
Twitter activity	20.73(57.7)	
Twitter popularity	255.06(768.9)	
- *Personal popularity*	112.63(333.4)	
- *Message popularity*	142.43(459.1)	
Followers	1581.76(4461.0)	
Age	42.98(11.9)	
Gender		
- Male		345(55.2%)
- Female		280(44.8%)
Political mandate		
- Yes		204(32.6%)
- No		421(67.4%)
Ethnic origin		
- Belgian or European		584(93.4%)
- *Non-European*		41(6.6%)
Election level		
- Regional		328(52.5%)
- Federal		272(43.5%)
- European		25(4.0%)
Political party		
- Flemish regionalists		90(14.4%)
- Christian Democrats		90(14.4%)
- Green Party		122(19.5%)
- Social Democrats		89(14.2%)

[4] These newspapers are the broadsheets *De Morgen, De Standaard* and *De Tijd*, the popular papers *Het Laatste Nieuws* and *Het Nieuwsblad*, and the more regional oriented papers *Het belang van Limburg, de krant van West-Vlaanderen* and *De Gazet van Antwerpen.*

- Far-Right party	58 (9.3%)
- Liberal party	91(14.6%)
- Socialists	85(13.6%)

Results

To answer the first two research questions we need to get more insight in the data structure. In particular, we look at the interrelations between the different variables and the distribution of the variables. Table 2 presents a principal component analysis to test which dimensions of Twitter behavior can be distinguished. The analysis indicates that there are two separate dimensions. First of all we find, as expected, that sending tweets and sending replies both load on one component. This dimension is labelled Twitter *activity*. The analysis also shows that in contrast with our theoretical discussion of Twitter popularity, it is not possible to separate between two sub-dimensions -message popularity and personal popularity- here. Instead, the four different indicators all strongly load on only one factor, with factor loadings of .90 and higher. Also, if we compose one single scale out of these four indicators, we find a high Cronbach's alpha of .9. Thus, although personal popularity and message popularity in theory might reflect two different dimension of Twitter popularity, they are highly interrelated in practice.

Table 2: The factor loadings of the different Twitter metrics (Varimax rotated)

	Component 1 (Activity)	Component 2 (Popularity)
Tweets sent	**.873**	.338
Replies sent	**.962**	.056
Retweets received	.124	**.961**
Favorites received	.237	**.931**
Replies received	.348	**.905**
Mentions received	.083	**.927**

Before we investigate the relationship between the coverage in the traditional media and the new social media, it is useful to first look at these platforms separately. On average candidates appear in eight newspaper articles (see table 1). As the standard deviation (46.1) already suggests, the distribution is extremely skewed. Table 3 shows that close to 53% of the candidates did not receive any attention at all and 38% of the candidates were mentioned in 10 or fewer articles. In contrast, there is a very small group of candidates that were mentioned in more than 50 articles. For example,

Bart de Wever, leader of the N-VA (Flemish nationalist party) which eventually won the elections, was covered in almost 800 articles in the timeframe of this research. Thus, during the election campaign, traditional media gave voice to a very select group of candidates, whereas the vast majority of the candidates received very little or no attention at all.[5]

Table 3: Overview of media attention per candidate

Number of articles	Frequency (%)
0	52.8%
1-10	38.2%
11-20	3.4%
21-50	1.9%
51-100	2.1%
>100	1.6%

In line with the equalization hypothesis, optimism has been uttered about the potential of social media to include more voices in the debate. In comparison to traditional media, virtually anyone can access Twitter and post their messages. Regardless about half of all Flemish candidates does not have a Twitter account. Concerning the political candidates that do have a Twitter account (*N*=323), there is great variation between activity, popularity and the number of followers the candidates have (see Table 4 below).

When we focus on the candidates with a Twitter account, we see that 13% of them did not send any tweets in the weeks prior to the election. Another 29% of candidates sent fewer than ten tweets during the four week campaign period. Only about one out of ten candidates did send more than 100 tweets and can be considered as active users. Thus, in the light of the high percentage of candidates without a Twitter account, and considering that many of the candidates with an account barely sent tweets, we can conclude that a relatively small group has embraced the use of Twitter as a campaign tool.

When we look at Twitter popularity, we notice that only one candidate out of ten did not receive any attention on Twitter. This is very different from traditional media attention, as 53% of the candidates did not receive any attention in the newspaper. Thus, if a candidate has a Twitter account, it is very likely that one will receive at least some attention from other users in the form of replies, mentions, retweets or favorites. However, it seems that most of the candidates only received up to 100 retweets, favorites, replies or mentions, and a very small number of candidates (about 7%) receives

[5] From previous research we know that the distribution of television coverage is even more skewed in favour of the major candidates (Van Aelst et al., 2008).

over a 1000 of these. Thus, like media attention, Twitter popularity is skewed and only a small subsection of candidates are very popular on Twitter.

For follower count, we notice similarities with Twitter activity and popularity in the sense that most of the candidates have a limited number of followers and a small number of candidates have a lot of followers. As shown in Table 4, almost 44% of these candidates have fewer than 200 followers, while a small group of candidates (about 8%) has 5000 or more followers. The follower base of the ten leading politicians ranges between 13.000 and 47.000 (see Appendix B).

Table 4: Twitter activity, popularity and follower count

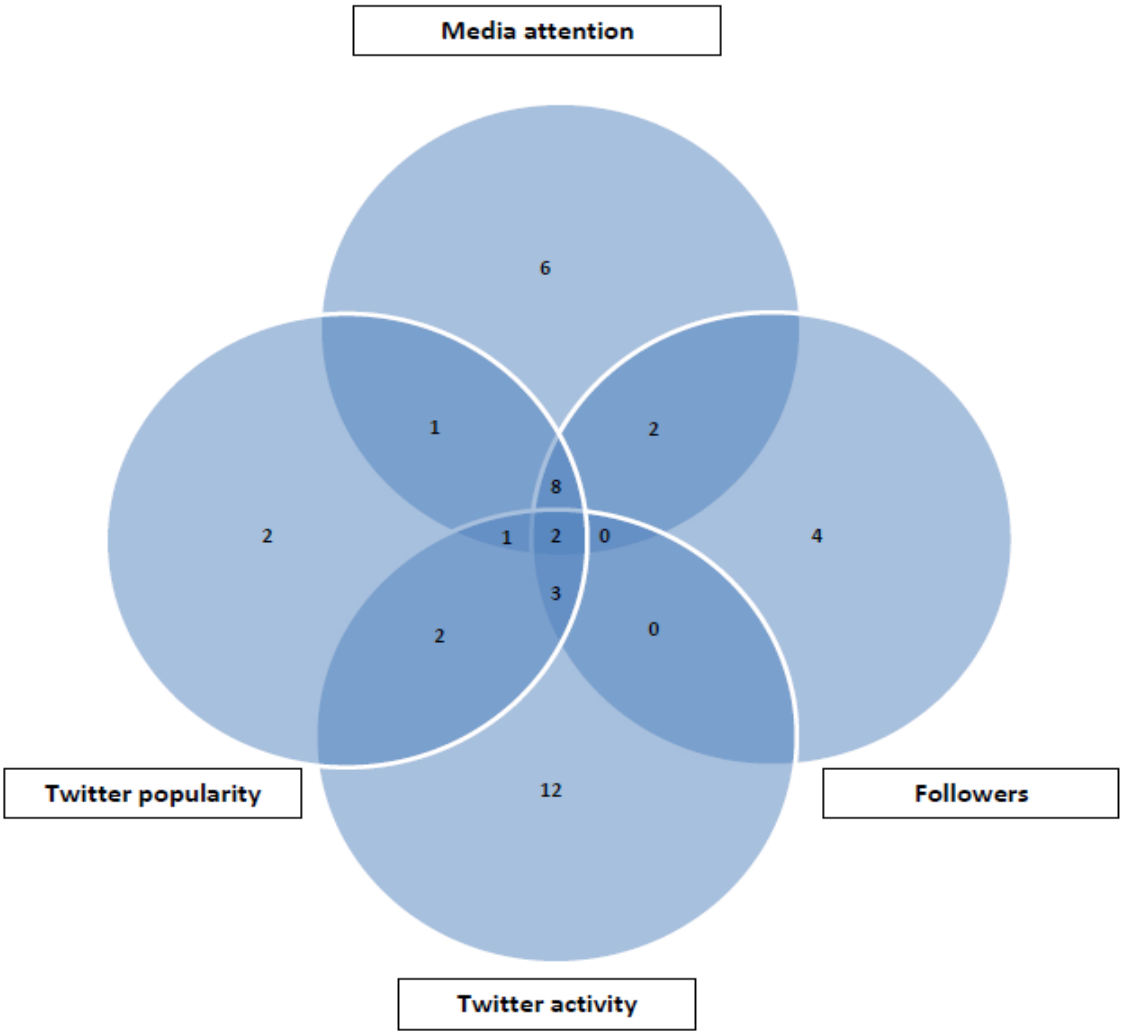
Activity	% Candidates	Popularity	% Candidates	Follower count	% Candidates
0	13.3%	0	9.6%	0-100	25.4%
1-10	29.4%	1-100	63.2%	101-200	18.3%
11-20	14.9%	101-250	9.9%	201-500	23.4%
21-50	19.5%	251-500	6.8%	500-1000	10.5%
51-100	12.8%	501-1000	3.4%	1001-2500	8.3%
>100	10.2%	>1000	7.1%	2501-5000	6.2%
				>5000	8.0%

In appendix A, we plotted Twitter activity, popularity and media attention in newspapers as relative measures. The three different curves show that Twitter popularity is slightly less skewed than attention in newspapers.[6] Yet, even though Twitter might be a slightly more egalitarian platform, the descriptives show that both Twitter and the traditional media are dominated by a select group of political actors. The question remains to what extent Twitter and newspapers produce the same political elites. To get a first insight in the overlap between the different platforms, we map out the top 20 candidates in terms of (1) media attention, (2) followers, (3) Twitter activity and (4) Twitter popularity. Appendix B provides an overview of the names of the different candidates.

Figure 1 shows the visual overlap between the four measures mentioned above. The number of candidates per diagram and union is presented in the figure.

Figure 1: An overview of the overlap of the top 20 for each measure.

[6] More exactly, the skewness measure of media attention is about 13, while the three Twitter aspects all score around 6. (A score higher than 1 indicates that the distribution is skewed.)



In general, we notice that only two candidates score high on all the measures. This indicates that not all the measures are interrelated in an equal manner. In addition, Twitter popularity and followers seem to match with media attention (i.e. eight candidates) rather than Twitter activity (i.e. three candidates). 12 of the 20 most active users are not present in any other top-20. Thus, activity is fairly unrelated to popularity on Twitter and in extension media attention, whereas Twitter popularity and followers are. In this respect, active use of Twitter does not necessarily translate in popularity on Twitter or attention in the newspapers. In sum, figure 1 shows that most of the candidates who dominate the traditional media charts, also belong to the most popular politicians on Twitter and have a high number of followers, although they are not necessarily the most active users.[7]

While a focus on the top candidates is useful, we get a more systematic idea of the relationship between the traditional and the new media if we take all candidates into account. In Table 5 below, we include the whole sample of candidates and calculate the correlations between the measures as

[7] Note that six users are only in the top-20 of media attention and not of popularity or followers. However, at least four of these users almost made it in the top 20 of followers and/or Twitter popularity.

provided in Figure 1. The table shows a relatively strong relationship between media attention and the number of followers. In addition, we find a significant correlation between media attention and Twitter popularity. Yet, contrary to what we would expect from figure 1, the strength of it the relation is only moderate. Table 5 also shows that the correlation between activity and media attention is significant yet weak, indicating that being active does not suffice to get media attention. Finally, when we look at the correlations between the different Twitter measures we see a strong correlation between the number of followers and Twitter popularity and also between Twitter activity and Twitter popularity. The latter is not surprising, since candidates who send more tweets can be expected to receive more retweets as well.

Table 5: Correlation matrix between media attention and twitter aspects. All variables are log transformed (N=323).

	Media-attention	**Twitter Activity**	**Followers**	**Twitter popularity**
Media-attention	1.00**	.231**	.630**	.471**
Twitter Activity		1.00**	.529**	.776**
Followers			1.00**	.746**
Twitter popularity				1.00**

* p<.05, ** p<.01

Based on the correlation matrix and the top 20, the first results are mixed. The top 20 lists indicate that those candidates who receive the most media attention are also the most popular on the social media, although not necessarily the most active. Yet, this relation is significant but moderate when we take all candidates into account.

For a more stringent test on the relation between traditional and new media, we run a number of regression analyses with media attention as dependent variable and the Twitter measures as independent variables. The regression analysis enables us to control for other factors which potentially influence the relation between the traditional media and Twitter (e.g. socio-demographics and party membership). As our data are not longitudinal, and therefore we cannot know whether Twitter popularity influences media attention or vice versa, we do not claim to make any causal inferences based on the regression models we present below. We choose to present the model with media attention during the campaign as the dependent variable.

Table 6: OLS regressions with the logged media as dependent variable (N=323). Fixed effects for political parties and type of elections are not depicted.

Media coverage (log)	**Model 1** b(SE)	**Model 2** b(SE)	**Model 3** b(SE)
Twitter activity (log)	-.208(.06)**	-.210(.06)*	-.109(.05)*
Twitter popularity (log)	.166(.07)*	.206(.07)**	.094(.06)
Followers (log)	.770(.09)**	.696(.09)**	.441(.09)**
Male		.274(.21)	.275(.19)
Age		.032(.01)**	.015(.01)**
Non-European background		-.217(.46)	-.008(.43)
Political mandate			.206(.22)
List position			-.057(.01)**
List puller			1.283(.43)**
List pusher			1.922(.35)**
Constant	-3.995(.50)**	-5.192(.57)**	-2.786(.64)**
R^2	**.420**	**.446**	**.531**

* p<.05, ** p<.01

Table 6 presents the impact of Twitter activity, popularity and followers on media attention. Stepwise, the different controlling variables were included to define alterations in the impact of the Twitter measures on media attention. Since the residuals have a non-normal distribution if we would run a normal regression, we use the log transformation of the skewed variables media attention, Twitter activity and Twitter popularity.

Model 1 regresses media attention on Twitter activity, the number of followers and Twitter popularity. We add dummies for the political parties and the type of election, to account for the nested data structure. To a large extent the model confirms our preliminary findings discussed above. Candidates who are more popular on Twitter also receive more attention in the media. We reach a similar conclusion if we look at the number of followers. Those candidates with the most followers are also the ones that attract most media attention. Remarkably, even though we previously found a weak but significant positive correlation between Twitter activity and media coverage, once we control for the other indicators this relationship becomes negative. Thus, candidates who receive most media attention are not necessarily the most active ones on Twitter, perhaps because they have less incentives to be so. In addition, candidates that get very little attention in the media might be more active on Twitter to compensate for their lack of visibility in the mainstream media.

Model 2 shows that, when controlling for socio-demographics, the relation between the independents and the dependent changes very little. Hence, the positive impact of Twitter popularity

on media attention still holds. In our final model, Model 3, we add list position, dummies for the list puller and the list pusher and a dummy for political mandate. Based on our preliminary findings on the top 20 candidates for Twitter activity, popularity, followers and media attention, it seems plausible that top candidates, party leaders and candidates that currently have a mandate, might explain the relation between Twitter popularity and media attention and fully drive the previous models. Indeed, in Model 3, we notice that the effect of Twitter popularity on media attention disappears once we control for list position and one's mandates. This indicates that the relationship between popularity in the traditional and in the new media exists primarily because a small political elite (mainly party leaders and ministers), receives most of the media coverage and are also the most popular politicians on Twitter.

Since we do not make any causal claims, we checked whether we find the same relations if we take Twitter popularity as dependent variable. This is indeed the case: all main results are confirmed (not in table). There is however one notable exception with effects going in the opposite direction. Controlling for other characteristics, older candidates get more attention in the traditional news media (see Table 6), while younger candidates score significantly better in terms of Twitter popularity (not in table). [8] This indicates that for younger politicians Twitter might be more relevant, or at least that using Twitter is more integrated in their personal campaign. With caution, we can read this finding as a sign that things may change in the future.

Conclusion and discussion

Over the years election campaigns have become more complex and multi-dimensional. New, mainly digital, media have entered the electoral arena, but the traditional media have maintained a central place in the campaign (Norris, 2002). Although campaign studies have devoted much attention to the use and effects of new social media, their relationship with the traditional media has remained underexplored. This study aimed to get a better idea of how old and new media go together by studying a large number of individual candidates. Overall, we cannot claim that it is popularity on Twitter which leads to more newspaper articles or vice versa. However, the two platforms are closely related: candidates who have a prominent position in the media are generally also the ones with a large number of followers and popularity on Twitter. This is not so much because more followers, mentions or replies translate directly into a higher coverage in the traditional media, but mainly

[8] We ran a similar model with twitter popularity as dependent variable. In this model age is significant at the P<.01 level with a coefficient of -.020. In other words, younger candidates are more popular on Twitter.

because a small political elite of predominantly party leaders and ministers is successful on both platforms. This elite receives almost all news coverage and at the same time is most successful in having impact with the tweets they send and generating some buzz. At the same time, we found that being more active on Twitter does not influence one's media attention. While candidates may employ Twitter as a way to get in the newspaper, our results suggest that in general this is not a successful strategy, especially if one is not part of the political elite. The young politician who is able to get media attention via his/her successful tweets seems to be the exception rather than the rule[9]. In this respect, our findings fit the normalization hypothesis.

As for now, opportunities for less prominent political candidates to get media attention via Twitter are very limited. From the perspective of an ordinary candidate these results are not very encouraging. Campaigns are still run via the mass media, in which a limited number of candidates appear in the spotlights. Even though commenters have been optimistic about the new opportunities Twitter may offer, enabling alternative candidates to be heard, our study shows that we should tone down these expectations, at least for now.

How can we explain these rather conservative findings? We believe there at least some reasons to assume that the equalizing power of Twitter is somewhat larger in other countries and for other time periods. First, it seems that Belgium is not an early adaptor when it comes to microblogging. The adoption rate of Twitter in Belgium (Flanders),which is less than 20%, lags behind that other social media platforms, such as Facebook (63%).[10] In comparison, the Netherlands, where up to 27% of the population uses Twitter (Comscore, 2011) is amongst the top countries concerning active Twitter use (Semiocast, 2012). This might also explain why a majority of Dutch politicians is very active on Twitter (Graham et al., 2014; Spierings & Jacobs, 2014), while in Belgium the majority of candidates is not making use of this social medium. Second, an election campaign might not the most obvious event to expect a more diverse representation of political actors. Several studies in political communication have shown that the dynamics between media and politics are different in campaign periods compared to routine periods For instance, in election times the media seldom introduce a new issue on the agenda as all political parties and major candidates are more active than ever (Walgrave & Van Aelst, 2006). Furthermore, election periods are mostly well announced in advance and news

[9] For instance, Kristof Calvo, a young MP of the Green party, was able to score the third place on the Twitter Popularity index (see Appendix B) without being very present in the traditional media. Another relative young politician, Alexander De Croo, Minister for the liberal party, stated in an interview that his steep political career was pushed by his success on twitter. De Croo has by far the most followers of all Belgian politicians (see Appendix B).

[10] iMinds-iLab.o (2013) Digimeter Report 6. Adoption and usage of Media & ICT in Flanders. Ghent: iMinds-iLab.o.

outlets carefully plan how to cover them, leaving little room for innovation or unexpected news. Also Jungherr (2014a: 254) suggests in his study on Twitter and traditional media coverage that campaigns are 'highly structured and ritualized' and therefore expects that 'nontraditional actors rise to greater prominence during other times'.

In sum, further research is needed to validate our findings in other countries and outside campaign periods. Next, we need to deepen our understanding of the mechanisms behind the interaction between old and new media. In particular, three streams of research seem necessary to develop further. First, we need to know more on how journalists use social media as a source of political information in their daily job and how activities of politicians influence their perceptions on the newsworthiness of these actors. Second, also looking more in-depth to those candidates and tweets that are successful in making it into the news could improve our understanding of the interrelatedness of traditional and new forms of political communication. Finally, it would be useful to consider the effects of Twitter on the election results. Although Twitter activity does not generate more traditional media attention, it might still be a useful strategy for ordinary candidates if it leads to more preferential votes. When studying different sorts of impact of Twitter this study at least showed that it is important to distinguish between different aspects of social media use by politicians.

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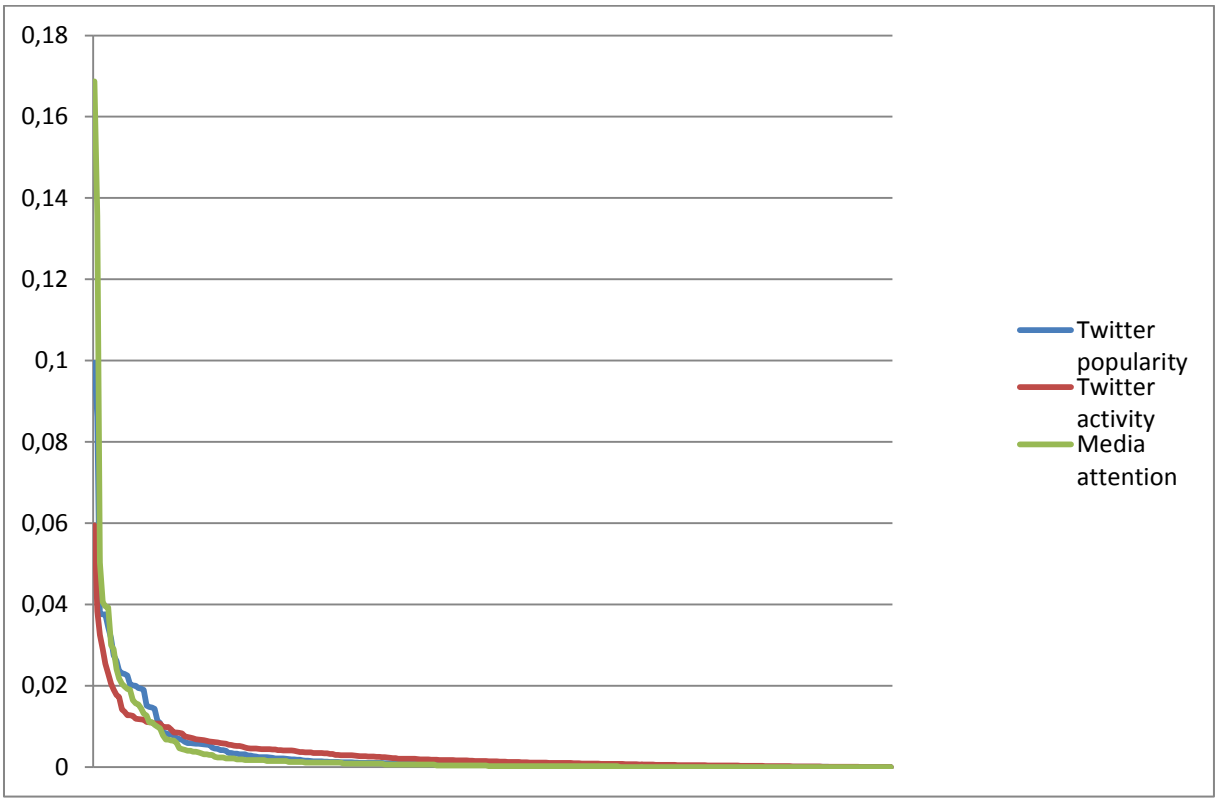
Appendix A: The relative distribution of Twitter popularity, activity and mass media attention



Appendix B: Overview of the top 20 in the media and on Twitter

Place	Media attention	Twitter activity	Followers	Twitter popularity
1	B. De Wever (798)	M. Penen (770)	A. de Croo (47301)	K. Peeters (8093)
2	K. Peeters (641)	T. Veys (497)	K. Peeters (25971)	B. De Wever (7012)
3	H. Crevits (238)	H. El Hannouti (421)	A. Turtelboom (23805)	K. Calvo (3067)
4	W. Beke (192)	F. de Clerck (375)	S. Bracke (23160)	F. De Winter (3059)
5	G. Bourgeois (187)	S. Smets (329)	F. van den Bossche (22805)	F. Van den Bossche (3057)
6	A. de Croo (186)	A. de Ridder (298)	B. De Wever (21860)	W. Beke (2803)
7	W. van Besien (142)	P. Cousaert (265)	H. Crevits (18507)	H. Crevits (2574)
8	A. Turtelboom (137)	D. Buntinx (247)	N. Slangen (17804)	P. Dedecker (2239)
9	K. Geens (114)	K. Peeters (230)	W. Beke (14708)	S. Bracke (2127)
10	J. Vandeurzen (103)	K. Geens (223)	J. Crombez (13370)	A. De Croo (1930)
11	J. Crombez (97)	A. D'Archambea (184)	F. Dewinter (10052)	F. De Clerck (1879)
12	P. Mertens (94)	D. Avonts (176)	M. de Clercq (9408)	A. De Ridder (1864)
13	J. Schauvliege (91)	F. Dewinter (165)	I. Lieten (9051)	W. Van Besien (1830)
14	B. Somers (90)	D. Vansintjan (165)	P. Dewael (8587)	K. Geens (1661)
15	F. Dewinter (78)	K. Calvo (163)	K. Calvo (8546)	P. Mertens (1637)
16	I. Lieten (74)	N. Slangen (154)	J. Schauvliege (7102)	J. Crombez (1627)
17	M.de Coninck (73)	P. Dedecker (153)	F. Piryns (6332)	T. Francken (1582)
18	P. Muyters (68)	D. Van Duppen (152)	B. Tommelein (6254)	P. De roover (1569)
19	H. Bogaert (62)	K. Janssens (151)	A. de Ridder (5911)	A. Turtelboom (1542)
20	F. Van den Bossche (60)	L. Ide (144)	P. Mertens (5853)	N. Slangen (1227)